ZF netDISPLAY™ 5MX

Complete OEM touch-screen computer



12.1" Front View



12.1" Rear View

Complete desktop PC functionality

12.1" or 15.1" active matrix color display

180MHz Pentium-class PC

Proven PC compatibility

5-wire touch-screen

10/100Base-T Ethernet

PC/104 and PCI expansion buses

1 parallel port

6 serial ports

2 USB ports

Soundblaster compatible

Rapid integration

Ready-to-run

Rugged

Low power

Ideal Applications Include:

Internet Appliances

Gaming

Information Kiosks

Point of Sale

Instrumentation

Security

Transportation Management

Industrial Control

The ZF netDisplay™ OEM Flat-Panel Computer is a complete, ready-to-run, 180MHz Pentium-class PC with a color LCD and touch-screen in a compact form factor, ideal for a wide range of OEM applications. The netDisplay offers 100% desktop computer functionality in a rugged, easily integrated package just over 2 inches deep and weighing only 2 pounds.

The netDisplay offers everything you'd expect from a PC-compatible. Standard I/O includes six serial ports, parallel port, two USB ports, keyboard port, external VGA and floppy and hard disk controllers. The netDisplay features 32MB of on-board RAM standard, and 2MB of solid-state flash memory. The netDisplay also features an industry-standard CompactFlash™ socket allowing simple expansion of solid-state memory.

With 10/100Base-T Ethernet also standard, the netDisplay is a perfect match for networked applications. The netDisplay supports Novell NetWare, SunSoft Solaris and a wide array of network operating systems.

The ZF netDisplay is available with a 12.1" or 15.1" active matrix color LCD. A high reliability, advanced technology touchscreen is included.

The netDisplay boots into DOS straight out of the box. This high level of integration frees you from the task of re-inventing the PC and allows you to focus on delivering true added value to your customers. The netDisplay is certified to run many other popular operating systems including Microsoft® Windows® 3.1, 9x, NT, CE, LINUX, Phar Lap's TNT Embedded ToolSuite®, Microware OS-9, and Sun's Embedded Java.

When your design calls for a flat-panel PC, turn to netDisplay, the industry's fastest, most cost-effective path to embedded touch-screen computing. The netDisplay offers 100% PC functionality backed by ZF MicroSystems' unparalleled customer support and guaranteed compatibility. For more information or to place an order, contact ZF MicroSystems or your local sales representative today.

ZF Embedded

We Make Computing Invisible

SPECIFICATIONS

ZF netDisplay™ 5MX Features

Pentium-Class CPU - 180MHz

- DRAM Controller Supports
- PC Core Logic with PC/AT Compatibility
- Fail-safe Boot ROM™
- Solid State Flash Memory Devices
- Watchdog Timer
- PC BIOS
- 32MB DRAM on-board
- Expandable DRAM to 180MB w/128MB DIMM

Ethernet Controller

- 10/100BaseT (twisted-pair)
- IEEE 802.3 and Ethernet standards
- LNKST and RCV LED verification
- Network Boot PROM capability
- Supports Microsoft's Plug and Play System configuration
- NOS support, including Novell Netware, Microsoft Windows 95 and LAN Manager, SCO UnixWare, IBM LAN Server, SunSoft PC NFS and Solaris, Artisoft LANtastic, Banyan Vines

Standard Ports

- Six 16550-compatible serial ports. All are RS232. One is selectable as RS232 or RS485 (COM 6). One is unavailable if touch-screen controller is populated (COM 2).
- One fully-compatible PC/AT parallel printer ports, plus bi-directional operation (EPP).
- Two USB ports.
- Keyboard port

Expansion Buses

- Supports the PC/104 expansion bus (nonstack through version).
- Add up to three PC/104 modules.
- Supports PCI expansion bus.
- PCI 2.1 complaint.
- Supports PCI initiator-to-ISA and ISA master-to-PCI cycle translations.

Flat-Panel Display Specifications

12.1" Active Matrix Color Display

- Resolution: 800 x 600
- Viewing angle: 160°
- Brightness: 150 cd/m^2
- Contrast ratio: 100 min., 150 typical

15.1" Active Matrix Color Display

- XGA Resolution: 1024 x 768
- Viewing angle: x axis = 110° min, 120° typical @ contrast ratio ≥ 10.
 y axis = 80° min, 90° typical @ contrast ratio ≥ 10.
- Brightness: 170 min, 200 typical cd/m^2
- Contrast ratio: 150 min, 200 typical

Touch-Screen

- Resistive technology
- Transparency: 80% ± 5%
- High resolution: 4096 x 4096
- Operating life: 35 million touches

Floppy Disk Controller

- Software compatible with 765B controller.
- Integrated digital data separator capable of data transfer rates up to 2Mbps.
- Requires no external components.
- Requires special cabling, uses a FFC connector

IDE Hard Drive Interface

- Full 40-pin interface to standard IDE hard disk drive.
- Up to two IDE drives (master/slave).
- Supports CompactFlash™ on second channel.

Audio Support

- Soundblaster compatible
- 16-bit stero FM synthesis
- OPL3 emulation

Solid State Flash Memory Devices

- 2MB Internal Flash Memory. of which 1.4MB of Resident Flash Disk is available for DOS and OEM software use, usually the boot drive.
- One 32-pin sockets for JEDEC byte-wide memory Flash EPROM or NVRAM.
- Expandable by adding 2MB to 60MB of CompactFlash.

Electrical Specifications

- Requires +5VDC @ 2.2 A ±5% (32MB DRAM), 12VDC @ 250mA

Mechanical/Environmental

- PC/104 bus header
- Standard ribbon cable connectors, except floppy
- Standard connectors for CRT, PS2, keyboard, USB, 100Base-T Ehternet, mic in and headphones.
- **Operating temperature:** 50°F to 104°F (10°C to 40°C)
- **Storage temperature:** -4°F to 140°F (-20°C to 60°C)
- **Relative humidity:** 5% to 85% non-condensing
- **Size and Weight:** 12.1" Display + SystemCard 5MX: Size: 9.2" x 11.1" x 2.2" (234mm x 282mm x 56mm),Weight: 2 lbs (907 gm)

 15.1" Display + SystemCard 5MX: Size: 14" x 11.75" x 2.2" (356mm x 299mm x 56mm),Weight: 7 lbs (3175gm)

Ordering Information

ND1-5MX-Q-01
netDisplay SCX, 12-inch TFT Active Matrix LCD (no touch)

ND1-5MX-Q-02
netDisplay SCX, 12-inch TFT Active Matrix LCD, Touch-screen

ND1-5MX-K-02
netDisplay SCX 5MX Development Kit,12-inch TFT Active Matrix LCD, Touch-screen

ND5-5MX-Q-01
netDisplay SCX, 15-inch TFT Active Matrix LCD (no touch)

ND5-5MX-Q-02
netDisplay SCX, 15-inch TFT Active Matrix LCD, Touch-screen

ND5-5MX-K-02
netDisplay SCX 5MX Development Kit,15-inch TFT Active Matrix LCD, Touch-screen

Note:

For more detailed information on CPU specifications, please refer to the SystemCard 5MX datasheets.

ZF Embedded, Inc.

Corporate Offices
1052 Elwell Court
Palo Alto, CA 94303
USA
Tel: +1-650-965-3800
Fax: +1-650-965-4050
1 (800) 683-5943
Email: info@zfmicro.com
http://www.zfmicro.com

European Offices
30, rue du Morvan, Silic 558
94643, Rungis Cédex
France
Tel : +33-(0)1-41-80-04-10
Fax : +33-(0)1-41-80-04-11

RBNETD12/99

© 1999 ZF Embedded, Inc. OEMmodule, ZF netDisplay, ZF 104Card, ZF SlotCard, and ZF Embedded are trademarks of ZF Embedded, Inc. All other trademarks or registered trademarks are property of their respective owners. Specifications subject to change without notice.